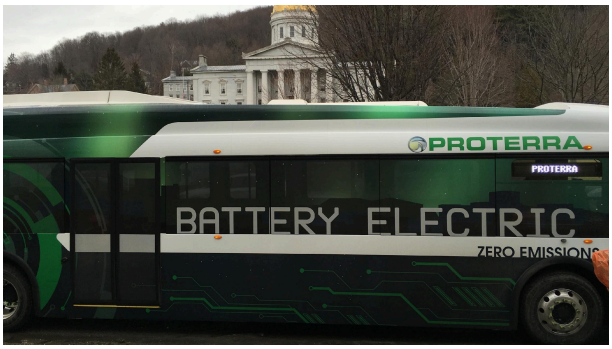
Future of Rural Transit

Reaching More Underserved Vermonters



The Future of Rural Transit project has a vision to prepare Vermont to have the most efficient, equitable, and cost-effective rural transportation system in the US.

Goal: Address environmental, equity and economic challenges in transportation by combining public, Medicaid, and school transportation into a single electrified public transportation system. This will:

- ➔ **Reduce transportation costs** for school, municipal, and state budgets.
- ➔ **Increase mobility options** and fill gaps in service for schools and community members. For the school community this could include additional rides serving students needing transportation for extracurricular activities and providing transportation to work for school employees.
- ➔ **Improve health** by reducing student and community contact with diesel fumes, which contain carcinogens and fine particulate matter associated with both asthma and cancer.
- ➔ **Reduce carbon emissions** by reducing the number of cars on the road and increasing use of efficient electric buses with zero tailpipe emissions.

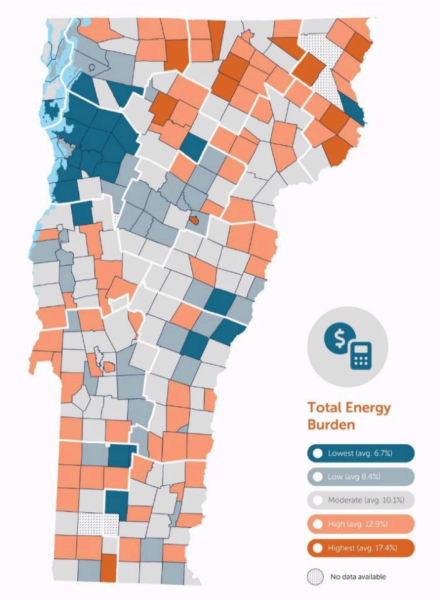
Project Overview: In most of the world, public transportation is one system serving schools along with the rest of the community; saving money and adding functionality to the system. Even in Vermont, children in Burlington ride the public bus to school. The idea of combining school and public transportation frequently comes up in community forums, but there are many challenges that have gotten in the way of making progress on the idea.

The Future of Rural Transit project has received grant funding to further study the concept and design a pilot for combined public transit and school transportation in Vermont. The first year of the project will include outreach and education efforts to identify suitable partners and routes for piloting this concept, as well as a detailed feasibility study looking at the opportunities and barriers of combining services, evaluating right-sizing vehicles and fleet sizes, and drawing from what Vermont and other states are learning about fleet electrification. Once suitable partners are designated and the feasibility study is completed, a demonstration pilot will be designed deploying electric buses (likely small “cutaway” models) to serve 1 or 2 rural school systems and surrounding communities.

Rationale

- ***Access****:* Many Vermonters, and particularly seniors, people with disabilities and rural residents, do not have access to affordable, convenient transportation to get to critical services.
- ***Emissions*****:** Diesel fumes from school buses contain carcinogens and fine particulate matter associated with both asthma and cancer. Studies show that children riding a school bus may be exposed to as much as 4 times the level of diesel exhaust as in a car ahead of it. An electric bus would reduce emissions to zero and, if also used for transit, would help take older polluting vehicles off the road, reducing emissions further.

- ***Affordability***: Transportation represents the largest share of dollars spent on energy for Vermont households (45%), and that burden is the highest for low-income and rural Vermonters, underscoring the need for affordable transportation where it is least available.
- ***Efficiency***: Vermonters are supporting two public transportation systems to transport students and the general public. Combining services could save taxpayer money and improve access to more routes for all Vermonters.
- ***Reduced Operations Costs:*** If charging is properly managed, electric buses will have lower fuel costs than diesel buses. And with fewer moving parts, electric buses will have lower maintenance costs.
- ***COVID 19****:* The impact of COVID 19 on Vermont's economy is immense and the most vulnerable populations are being hit the hardest. Given the importance of transportation, the need for affordable (and clean) transportation alternatives is critical.



The **Vermont Energy Burden,** which shows annual spending on energy as a percentage of income, is a powerful metric for understanding the impact of energy costs on Vermonters and their communities. Across Vermont's towns, the energy burden varied from 6% to 20% of household income. This burden is highest in rural areas and among lower income groups.[1]

Transportation remains the largest component of most households' energy spending (45% on average). On average, total average energy spending ranged from about $3,860 to $6,950 across Vermont in 2019.

Vermont currently has approximately 450 school buses and 420 transit buses and combined service could save money while increasing access to Vermonters with high transportation burdens.

Case Studies – Have combined services been done elsewhere? YES

- **Southeast Vermont Transit (SEVT) Tripper Service:** mass transit vehicles are modified to accommodate school students and personnel. Surrounding towns to Brattleboro put students on SEVT and contribute $4,000 annually. Do not need to budget for school bus purchase or management.
- **Burlington, Vermont:** the Burlington School District has contracted with Green Mountain Transit for years to provide school transportation for Burlington students.

Steering Committee

- EAN (Energy Action Network)
- VT Clean Cities Coalition
- VEEP (Vermont Energy Education Program)
- VEIC

Advisory Committee

- AARP
- Vermont Center for Independent Living
- VTrans - Public Transit
- VT Superintendents Association
- Green Mountain Power
- Green Mountain Transit
- VT Businesses for Social Responsibility
- VPPSA
- VT Dept Public Service
- Vt Natural Resources Council
- Vital Communities

[1] Vermont Energy Burden Report 2019 - Justine Sears and Kelly Lucci, Efficiency Vermont.